**Intelligence without Essence:**
**Rejecting the Classical Theory of Definition**

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**Abstract**:

*What is intelligence? After three decades of academic research, we are no closer to answering this question. This article argues that using the Classical Theory of Definition – where one attempts to find the individually necessary and jointly sufficient conditions of intelligence – is futile. In the first section I argue that because the term intelligence is relativized by groups of language users, it means different things to different groups. I then argue that the term is evolving quickly — due to the enormity of data generated online. It then goes on to advance the case for a new framework, drawn from Ludwig Wittgenstein's* Philosophical Investigations, *that seeks to classify "intelligence" as a family resemblance concept – moving beyond locating the "essence" of intelligence.*

**Keywords**: Intelligence studies; Wittgensteinian; big data; datafication; secrecy; intelligence theory

**Intelligence without Essence: Rejecting the Classical Theory of Definition**

"To show the fly the way out of the fly bottle" — that, Ludwig Wittgenstein said, was the aim of his philosophy.[1] The comment, in *Philosophical Investigations*, was directed at his fellow philosophers – including his younger self – who get caught in seemingly escapable glass traps by covetously observing success in science, and its ability to give reductive explanations.[2] The concepts Wittgenstein and his contemporaries were interested in, however, were highly resistant to the scientific method. Wittgenstein compared their endless struggle for a structured logical form applicable to everything to the fly, which constantly attempts to escape by slamming into the the inside of the transparent bottle. What was needed, Wittgenstein observed, was a way out – a liberation from the glass prison of pretend obstacles philosophers had put in front of themselves, by paying attention to the role concepts really play in our thoughts and language. "Don't think, but look!" Wittgenstein repeatedly bellows in *Philosophical Investigations*.[3]

The approach Wittgenstein imparted to his peers is equally relevant to intelligence scholars today in the three decade-long definitional debate over the subject's core concept. The failure of this process to provide a satisfying definition has produced, and been accompanied by, the persistent claim of "under-theorisation". The way out of our fly-bottle, however, is not by discovering "new information, but by arranging what we have always known" – applying a new philosophical framework to the concept of intelligence.[4] The previous philosophical framework, the Classical Theory of Definition, that attempted to locate the "essence" of intelligence is futile for two reasons. First, because the term is relativized to groups of language users – it means different things in different cultures. To illustrate this point, I will focus on perhaps the two closest intelligence communities, the United Kingdom (UK) and the United States (US), and demonstrate that profound differences exist between how intelligence is conceptualized in both states. I focus here on arguably the two closest intelligence communities, often referred to in a single breath as "Anglo-American",

because definitions of intelligence from inside the Anglosphere present the most charitable case for detractors of my argument. If marked differences exist here, then greater variations will exist elsewhere. Second, I will show how the concept of intelligence has undergone changes due to the impact of datafication (primarily) and the drastic changes this entails for how intelligence is collected, secrecy and the shifting of ownership.

After illustrating how the Classical Theory of Definition fails to deal with the complexity of a concept like intelligence, I will lay out the case for intelligence as a concept with "blurred edges". I will draw on the *Philosophical Investigations* of Wittgenstein in an attempt to move past locating the "essential core" of intelligence and instead look for the "family resemblances" within the concept.[5] Through this final section, I will show how intelligence does not have just one essence, or no essence at all, but that it in fact has more than one, and that these "overlap and crisscross in complex ways."[6]

Before moving inside the Anglosphere – which will comprise the first section in my tripartite argument – it is necessary to show that contributors to the definitional debate in Intelligence Studies have attempted to apply the Classical Theory of Definition. Firstly, because writers on the subject have, for the most part, posited narrow definitions of intelligence, often as a prelude to positing a theory of how intelligence works.[7] Also, as I am arguing for an unbound concept with blurred edges, previous definitions and explanations over the failure to define intelligence is a logical place to start.

**The problem that won't go away**

The debate within Intelligence Studies over its central conceptual term is by no means a discipline-specific problem. International security experts have debated the term "terrorism" *ad nauseam*, while biologists have been at war over the term "species" for over two centuries.[8] In contrast to these parallel debates over the respective essences of "terrorism" or "species", scholars of

intelligence add that intelligence is under-theorized. In short, they posit the following: if we think harder we could get a better, more functional, definition of intelligence. In 1985, Walter Laqueur was one of the first to forward this claim, suggesting that "all attempts to develop ambitious theories of intelligence have failed".[9] David Kahn echoed Laqueur at the beginning of this century when he said "...scholars have called for a theory of intelligence. None has been advanced".[10] In 2002 Michael Warner in *"Wanted: A Definition of 'Intelligence"*" also advanced on the same front: "As historian Walter Laqueur warned us, so far no one has succeeded in crafting a theory of intelligence".[11] The under-theorizing claim is not solely a US Intelligence Studies phenomenon. The same argument has been forwarded in the "British School", which is more rooted in History.[12] For example, in 2004, Christopher Andrew, widely regarded as one of the Founding Fathers of British Intelligence History, argued that the subject was notable for its "under-theorisation".[13]

Despite this claim, on both sides of the Atlantic, serious theorizing of intelligence has taken place in the three main journals – *the Journal of Intelligence and CounterIntelligence*, *Intelligence and National Security*, and *Studies in Intelligence* – as well as sporadically elsewhere.[14] Yet, despite these analyses on intelligence, the "under-theorisation" claim persists. This, however, is not surprising due to the philosophical approach adopted by almost all intelligence scholars: the Classical Theory of Definition.[15] Intuitively, when applying this theory, what one attempts to encapsulate in a definition is its defining characteristics. The Classical Theory of Definition does this by establishing intensionality – or, in other words – establishing necessary and sufficient conditions.[16] For instance, with the example of a triangle, the definition sets out the individually necessary and jointly sufficient conditions for the correct application of the definiendum (in this case a triangle). Ergo, a shape cannot be called a triangle unless it (a) lies in plane, (b) is closed, (c) has exactly three sides, and (d) has straight sides. Each of these conditions is necessary for a shape to be a triangle; nothing can be a triangle that fails to satisfy *all* these conditions. Additionally, no subset of these conditions, i.e. one or a pair among these, comprises jointly sufficient conditions for

a shape to be a triangle.[17] The total set of conditions, one to four, are jointly sufficient and necessary conditions for a shape to be considered a triangle. Anything that satisfies all four conditions *is* a triangle. A clear-cut and unproblematic case satisfies the Classical Theory of Definition.[18]

Intelligence, on the other hand, is not as unproblematic and clear-cut – it is a sophisticated classificatory term. Creating a definition that uses the Classical Theory of Definition is a reductive exercise, such that when it is applied to a concept like intelligence, it cannot do justice to the various ways in which that word is used. Let us take Michael Warner's definition from his essay "*Wanted: A Definition of 'Intelligence'",* as our canary in the coalmine. Warner's definition is a good choice, as it is one of the most – if not the most – widely used and cited examples in Intelligence Studies. Warner defines intelligence as "*secret, state activity to understand or influence foreign entities".*[19] The definition is simultaneously too narrow and too broad to meet the criteria of the Classical Theory of Definition. Too narrow, because in the age of datafication intelligence is often un-secret and non-state. Warner's definition is also too broad, as it fails to include counter-intelligence or the expanding sector of business (competitive) intelligence.[20] His definition, somewhat uniquely, alludes to covert action – which partly explains its wide appeal – but puts intelligence agencies whose sole purpose is collection, secret or otherwise, outside the frontier of the definition. Clearly then, from its inception, Warner's definition of intelligence was problematic when crafted to define US intelligence in 2002.

It follows that the "under-theorisation" argument in intelligence studies is a symptom of applying the Classical Theory of Definition to complex terms when it cannot capture the multi-essence of intelligence across cultures and time. The theory perpetuates a constant pursuit of exactitude, and stimulates unceasing debates over what *the* specific properties of "intelligence" are, and *why*. Even subjects like biology – where there is no claim of under-theorizing in the understanding of a central conceptual term like "species" – are afflicted by this pursuit of false precision. The search for the

solution to the "species problem" within biology is instead motivated by the continuous search for more empirical evidence.

The definitional problems, however, cannot be solved by more thinking – as suggested by the above intelligence scholars – or with more data – as forwarded by the evolutionary biologists – but by rejecting the Classical Theory of Definition. Almost no sophisticated classificatory terms have just *one* necessary condition, an essence. Instead there are sets of necessary and sufficient conditions, not 'one thing in common which makes us use the same word for all – but they are related to one another in many different ways.'[21] Wittgenstein called these phenomena 'family resemblances' – which we will return to after I have shown how the essence of intelligence has, and can, morph in different cultures and times. [22]

**Culture and intelligence: disparities within the Anglosphere**

During the late 1970s, Roy Godson's "elements" of intelligence were part of a conscious effort to create a measured debate about intelligence within higher education. Godson, working closely with Ray Cline, was reacting to the highly critical tone of the Watergate hearings and the associated season of inquiry into intelligence during that decade.[23] However, even before Godson created a National Centre for the Study of Intelligence in Washington, individuals within the nascent US intelligence community were thinking about theories of intelligence. This reflected the fact that wartime agencies had raided US academia for analysts during the Second World War.[24] As early as 1946, Sherman Kent, the founder of the CIA's in-house journal *Studies in Intelligence* penned a perceptive article which was published in the *Yale Review*. Kent identified an important inconsistency that existed in defining intelligence:

> The main difficulty seems to lie in the word 'intelligence' itself, which has come to mean both what people in the trade do and what they come up with. To get this matter straight is crucial: intelligence is both a process and an end-product.[25]

By 1949, in his ground-breaking book, *Strategic Intelligence*, the side Kent was on in this argument became clear. Kent's conceptualization of intelligence had shifted more towards the notion of intelligence as an analytical discipline, embodied in his aphorism: "intelligence is knowledge".[26] Philip Davies captures Kent's view best by placing it in a comparative context:

> Since Kent's day, many alternative approaches to intelligence have been suggested by a succession of authors. In his 1996 *Intelligence Power in Peace and War*, British scholar and former intelligence officer Michael Herman tried to present the range of conceptualizations of intelligence as a spectrum, ranging from the broad definitions that approach intelligence primarily as "all-source analysis" (typified by Kent's view) to narrow interpretations that focus on intelligence collection, particularly covert collection. Herman notes in passing that the broader interpretations tend to be favored by US writers and narrow approaches by the British.[27]

Succinctly, British writing on intelligence tends to emphasize narrow definitions around collection and secrecy, whereas in the US broad definitions around analysis are seen as a constituent part of intelligence as a governmental information machine.[28] This transatlantic difference is underlined by the observations of Ken Robertson, one of the first social scientists in the UK to study intelligence. Robertson placed a strong emphasis on the clandestine when he defined intelligence as 'the secret collection of someone else's secrets'.[29] Similarly, the aforementioned Christopher Andrew defines intelligence as "to obtain by covert means, and then analyse, information which policy makers cannot acquire by more conventional methods".[30] The focus of this definition is collection and

secrecy, with the analysis, grammatically within the sentence, taking the form of a weak interruption.

By contrast, most US writers who move in the Kentian tradition tend to favor broader definitions. David Kahn, for instance, defines intelligence simply as "information" and laments "none of the definitions that I have seen work. It is like the term 'news'. Though all but impossible to define, every journalist knows what it is: when something newsworthy is said in a court or a legislative hearing, all the reporters start taking notes".[31] Kahn was on to something important with his analogy to news. However, his solution – taking the broadest definition possible – creates a definition that cannot work because it is overly determined; something less than all "information" might be jointly sufficient to be considered intelligence. Jennifer Sims, a Georgetown academic who served in the State Department's Bureau of Intelligence, also offers a broad definition of intelligence as something akin to social science, seeing it as "... the collection, analysis and dissemination of information on behalf of decision makers engaged in a competitive enterprise".[32] Again secrecy is absent here. Lyman Kirkpatrick, who as well as writing widely on intelligence has held numerous high-ranking positions in the CIA, strikes a similar tone by defining intelligence as: "the knowledge—and, ideally, foreknowledge—sought by nations in response to external threats and to protect their vital interests, especially the well-being of their own people".[33] Thomas Troy, who served as an analyst with the CIA for more than a quarter of a century, captures this best, suggesting that: "Intelligence, as a kind of knowledge, stands independently of the means by which it is obtained and the process by which it is distilled".[34]

The divergence between US and UK definitions is also clear when we consider institutional definitions. The British focus on secret collection while American definitions suggest that the role of the intelligence community is to distil information for policymakers. Directors-General of MI5, both past and present, tend not to emphasize assessment. In 1994, Dame Stella Rimington noted

that the role of MI5 was to "develop intelligence to the point where direct action to counter the threat is appropriate".[35] The current Director-General, Andrew Parker, echoes the same sentiment: "Covert threats to the UK's security can arise from many different quarters. Wherever and whenever they do it is MI5's job to be there, gathering intelligence, investigating and disrupting to protect the United Kingdom".[36] Although neither was attempting to define intelligence, both make a crucial distinction between gathering intelligence and investigating; Parker also notes security in respect to the threats being covert. The process of collection here is the core intelligence work, whilst the analysis forms part of the investigation. Meanwhile, conspicuously absent from almost all discussion of intelligence by British practitioners is covert action, a deliberate sanitization which has distorted our understanding of the subject.[37]

Typically, the UK's SIS defines intelligence as "Information acquired against the wishes and generally without the knowledge of the originators or possessors. Sources are kept secret from readers, as are the techniques used to acquire the information. Intelligence provides privileged insights not available openly".[38] Similarly, the UK Security Service defines intelligence as "information of all sorts gathered by a government or organization to guide its decisions. It includes information that may be both public and private, obtained from many different public or secret sources".[39]

What is clear from looking at these UK official definitions is the importance placed on collection and secrets. This is also reflected in the landmark 2004 Report on intelligence and WMD by Robin Butler, Britain's most experienced Downing Street mandarin. It explained that to supplement their knowledge, "governments turn to secret sources. Information acquired against the wishes and (generally) without the knowledge of its originators or possessors is processed by collation with other material, validation, analysis and assessment and finally disseminated as 'intelligence'".[40] To further make the point clear, the report makes reference to the relative neglect of assessment within

the UK system, a point also made by the Franks Report into the intelligence background to the Falklands War.[41] The main outcome of the Butler report was to create a Professional Head of Intelligence Analysis to try and improve UK assessment, but within a few years, the UK obsession with secret collection re-asserted itself and the post was quietly abolished.[42]

By contrast, America's highest intelligence authority, the Office of the Director of National Intelligence, prefers broader definitions that emphasize a blend of analysis and assessment. Citing the Intelligence Reform and Terrorism Prevention Act of 2004, it insisted that National Intelligence and the term "intelligence related to national security" refers to all intelligence, "regardless of the source from which it is derived" and includes information gathered within or outside the U.S. that pertains to: "(1) Threats to the U.S., its people, property, or interests; (2) The development, proliferation, or use of weapons of mass destruction; or (3) Any other matter bearing on U.S. national homeland security".[43]

Definitions offered by individual US agencies such as the CIA and FBI also reflect this emphasis on analysis. The CIA argues that: "Quite simply, intelligence is the information our nation's leaders need to keep our country safe. The employees of the CIA provide intelligence to the President, the National Security Council, and all other government officials who make and carry out US national security policy".[44] The FBI strike a similar tone, "Simply defined, intelligence is information that has been analyzed and refined so that it is useful to policymakers in making decisions—specifically, decisions about potential threats to our national security".[45] Both emphasize information that has been analyzed to assist officials who carry out wider security policy. Other than agreeing on the importance on providing insight, the divergence between the UK and the US is striking. The distinction goes right to the top: British prime ministers have long enjoyed a supply of raw reporting while American presidents have tended to be fed pre-digested material in the form of the President's Daily Brief.[46]

Despite the fact that the UK and US are the two most closely integrated intelligence communities, their definition of intelligence is not shared. Notwithstanding a long historical association and a shared commitment to democracy, the essences of their respective concepts of intelligence differ. Like Rugby and American Football: both are games, both share common lineage, are full contact sports, have similar rules, tactics, structures, equipment and governing bodies – however avid spectators of either sport would tell you, likely in great detail, how different the sports are from one another. The lack of convergence in the UK and US highlights distinctions in national concepts of intelligence; and, *a fortiori,* if such disparities are present between these two closely linked states, a definition will not be shared between the UK and Russia, or the US and China. Both John Dziak and Ray Godson have categorized Russia as a "counterintelligence state" in which intelligence agencies have evolved out of an almost paranoid concern about threats to the regime rather than the need to provide information for decision-makers.[47] In short, each local definition, concept or theory of intelligence has its own unique values, social customs and historical narrative that precipitate the national perception of how intelligence should be conceived — the culture defines the craft.

**"Datafication" & Mass Surveillance: intelligence evolving**

The Internet is now the primary means for humans to exchange data. Most people now accept that the Internet has commenced a new age of global communication in the twenty-first century, but what few people realize is that Internet use is still *rapidly* accelerating. By the end of 2014, there were almost three billion Internet users, two-thirds of them coming from the developing world; and in developing countries, the number of Internet users has doubled in only five years, from 974 million in 2009 to 1.9 billion in 2014.[48] In August 2012 Amit Singhal – a Senior Vice President at Google and the man, with his team, responsible for the Google search algorithms – disclosed that Google's search engine crawls 20 billion sites a day and processes 100 billion searches every month.[49] Singhal's figure was confirmed by *Google Zeitgeist 2012*, which reported 1.2 trillion

searches for 2012.[50] Facebook, as of December 2015, has 1.04 billion daily active users and 1.59 billion monthly users on average – meaning just under a fifth of the world population are registered on the website.[51]

The growing number of individuals exchanging data on various platforms online has fundamentally changed how, when and from whom intelligence is collected. The twenty-first century is a digital book and anything from trivialities, like your most-read news items, to more personal information, like medical records, is stored on computers with the majority of this data accessible virtually. One of the biggest consequences of this is that intelligence agencies no longer "own" intelligence, with large swaths of collection and analysis being performed by privately held companies often outside the yoke of a nation's states legal framework. Indeed, Warner notes in his latest book that this "democratized form of intelligence" is here to stay, with the repercussions being the disintegration of a state monopoly on intelligence.[52] With information moving from being stored in vaults to clouds, Western intelligence communities have followed suit and are now funneling ever-increasing resources into online spying platforms and Signals (SIGINT) intelligence agencies have shifted much of their attention to data mining from sources that are open or that have only limited protection. Another reverberation of this is an increase in surveillance and counter-terrorism operations; and a corresponding decrease in Cold War style counter-intelligence operations against agents with deep cover.[53]

The Internet is low-hanging fruit for intelligence agencies. The profound changes resulting from datafication present an unprecedented opportunity for intelligence communities to gather information. New forms of Social media (Facebook, Twitter, LinkedIn, etc.) are the largest and most dynamic evidence-based platforms ever created. Consequently, they also provide for the possibility of studying human behavior and the understanding of groups, movements or societies. Datafication, however, also represents an enormous threat. With such an explosion of information,

the problem of managing, manipulating and analyzing data can overwhelm. Intelligence analysts can overload on information and vital details can be missed against a blizzard of background noise.

The US intelligence community was not caught totally unawares by these technological changes. Over more than a half a century, big data has played an important role in intelligence collection. This is especially true within the US, where the biggest collector of intelligence and employer of mathematicians and science PhDs is the National Security Agency.[54] The inability of the Central Intelligence Agency in the early days of the Cold War to recruit human agents within secure police states like the Soviet Union and China contributed to the US focus on building up expertise in technical intelligence of many kinds. However, despite this historic technological advantage which the US had over the Soviet Union, it was not until after 11 September 2001 that the role these major technological developments had played on intelligence became visible, since it was at this point that the focus shifted from states and armies to people and transnational violent actors. Accordingly, a combination of factors in the post-9/11 world, including leaps in technology, (predominantly in analysis), new adversaries and the rush by individual citizens to embrace social media, pushed intelligence into uncharted territory. The intersecting of these three factors created a different environment from the ones that states had operated within during the Cold War, and advocates for updating our understanding intelligence emerged.[55]

The theorizing over the consequences of datafication has resulted in a fissiparous debate over the essence of intelligence, with divergent national responses to each new phenomenon. In the UK one of the leading advocates of the idea that datafication has fundamentally altered intelligence, David Omand, has described it as a move away from the days of the Cold War "secret state" to those of the media-age "protecting state".[56] By contrast, in the US, this change has often been seen through the militarized prism of a "revolution in intelligence affairs," with a succession of editorials, articles, books and lectures on how to "fix" American intelligence for the twenty-first century.[57]

Deborah G. Barger, a former practitioner, in *Towards a Revolution in Intelligence Affairs* argues this quite emphatically, as do Louis Andre, Bruce Berkowitz, John Bodnar and William Nolte.[58] Other prominent intelligence writers have also reflected on datafication altering intelligence. Jennifer Sims, Michael Herman, Gregory Treverton, Michael Warner and others have contributed and acknowledged a change in the role of intelligence from the old Cold War paradigm, although they do not go as far as to call it a revolution.[59] Much of the discourse in both the UK and US has focused on intelligence reform set against multiple wars in the Middle East and South Asia. Nevertheless, what cannot be denied is the accelerating influence of datafication on practices of intelligence towards something new in the West, but not necessarily in the old East.

The contrast between NATO and old Eastern bloc states during the Cold War highlights how datafication is altering conceptions of intelligence in the English speaking world. One of the defining differences during the Cold War was the ubiquity of the Soviet Bloc's internal ministries' surveillance of their own citizenry. The German Democratic Republic's (DDR) Ministry for State Security – the Stasi – at the extreme end of State surveillance, had 91,000 professional employees and some 174,000 informants for a population of barely sixteen million in 1989. This meant one in every 180 East Germans was an employee of the Stasi.[60] This startling statistic not only reveals the depravity of the DDR, but the depth and emphasis it placed on surveillance. Today, Western States and large corporations have the capability to put in place surveillance architectures that Erich Mielke could only dream about. Due to the amount of time we spend immersed in virtual existence daily, if the State's Security Service were so inclined, the Stasi's notion of *flächendecke Überwachung*, or "comprehensive surveillance", would be achievable.[61] Surveillance capabilities today might actually be more frightening than in Mielke's dreams. If I were shopping in the DDR and the merchant behind the counter turned out to be an informant, she *could* take note of my purchases. Her monitoring, without the will to record my visit and purchases, does not generate a searchable record or exist in perpetuity. Today, online merchants – or those employed to monitor,

from security officers to marketers – can store and generate searchable records of a transaction via open electronic network environments. That transaction can be combined with millions of others. Then, through data mining – the discovery of meaningful patterns through applied statistical analysis – exploitable "intelligence" can be generated.

Western states are deeply immersed in the applicability of data mining. 9/11 devastatingly demonstrated how Al-Qaeda were able to exploit the legal distinctions between "domestic" and "foreign" espionage. In the post 9/11 security environment, governments poured significant funding and research into improving the capacity, sophistication and ability to capture new data – including the translating of phone calls, voicemails and CCTV footage. The decline of Al-Qaeda and the rise of the Islamic State (IS) has only further incentivized the combining of datafication and domestic surveillance, with thousands of European Muslims travelling to Syria, and millions of Syrians seeking refuge in Europe. Today's surveillance horizon is vastly greater than the brick and mortar world of the DDR. Technology is getting faster, cheaper and easier to use, which is radically altering how we think about intelligence, what it can do and who it belongs to.

Despite an increase in tempo, debates over the expanding surveillance state are not new. Every reform of intelligence in the US since the national security act of 1947 has confronted robust opposition deploring the rise of an "American Gestapo".[62] What is new is *who* is generating intelligence; *how* intelligence organizations exploit everyday connectivity and the *scale* of surveillance. Most professionals readily accept that some two billion Internet users have little or no right to privacy or freedom of expression online thanks to pervasive surveillance or censorship[63] Moreover, governments' appetites to surveil their citizens are ever-expanding. Companies that report on government demands for user data are increasing. Between 2013 and 2014, Twitter reported a 78 per cent increase; Google, a 14 per cent increase; and Facebook, a 30 per cent increase. Between 2011 and 2013, Microsoft reported 30 per cent growth in the number of accounts

affected by secret US Foreign Intelligence Surveillance Act (FISA) requests, while Yahoo said it was "troubled" by the 67 per cent increase in accounts subject to FISA orders between the first and last half of 2013.[64] Peter Hennessy's concept of a Protective State offers us a good conceptual framework for these ongoing changes.

As hinted above already, changing technology alone is not driving the evolution of intelligence. Two other relevant factors are a change in primary adversary towards violent non-state actors and changing societal attitudes towards privacy. Hennessy puts the intersection of these three factors best: "The Cold War intelligence attack was state-to-state. The counter-terrorism attack has a multiplicity of targets, some of which are states, a source of inspiration and guidance through individuals and the internet, with followers and imitators across a large part of the globe in the form of loose networks or clusters of individuals".[65] Government assessments, senior officials, unofficial leaks and media reports corroborate this important point. Hennessy's second, more nuanced point is worth exploring in greater detail; what he refers to as the inversion of the secrets and mysteries problem in intelligence. "Secrets" being things like orders of battle and the location and capabilities of offensive weaponry; "mysteries" being the intentions, plans or objectives of one's adversary.[66] The inversion Hennessy and others have referred to is a switch from a Cold War intelligence paradigm, in which secrets could be acquired with relative ease and accuracy; whilst mysteries – for example, the intentions of the Politburo – were extremely hard to obtain and instead were often deduced by analysts in national intelligence estimates. Conversely, today the intention of IS and other extremist Islamist groups is well understood, whilst its secrets — where its terrorist cells are, what devices they plan to use and where they plan to attack — are of critical importance to intelligence communities in the fight against international terrorism, but are elusive.[67] This inversion has contributed to aggressive expansion of surveillance and what is considered "intelligence".[68]

The inversion of secrets and mysteries has also significantly contributed to the rise of the surveillance state in twenty-first century. It has underpinned an assumption that the gathering and analyzing of personal information is vital to national security. Some form of citizen surveillance has always existed - indeed the government's role as watchman is one of its primary functions. Nevertheless, the scale of surveillance today is unprecedented. CCTV images, biometrics (such as fingerprints or iris scans), communication records and the content of calls, or more commonly, the outline of numerical or categorical data of calls, are all collected. The combination of WikiLeaks and most recently the Snowden leaks have irrefutably demonstrated the NSA's and GCHQ's ability to access various types of private information on the Internet via the PRISM and TEMPORA programs.[69]

The revelations of these government programs have also demonstrated that datafication is a two-way street, with nation states scrambling – and often failing – to maintain the secrecy of major intelligence programs. Some scholars, like Richard Aldrich, have gone as far as referring to the problem, from a nation's state perspective, as a clear indication of the "death of state secrecy".[70]

Whistleblowers working within the American intelligence community and the exposure of a previously secret government program on domestic espionage are not new. Seymour Hersh writing on Operation MHCHAOS or Bob Woodward's anonymous sources reporting on the Watergate scandal are two obvious examples. What is new, and staggering, is the scale. Allegedly, Snowden's revelations showed that the National Security Agency has piggybacked on organizations like Google. Inside ISP providers and telecoms, unimaginable amounts of unencrypted data were available. NSA internal slides on PRISM showed that the agency could access data and perform "extensive, in-depth surveillance on live communications and stored information" with examples including email, video and voice chat, videos, photos, Skype, file transfers, and social networking details.[71] Additionally, in the UK, GCHQ program, TEMPORA, uses intercepts on the fiber-optic

cables that make up the backbone of the internet to gain access to large amounts of internet users' personal data, including recordings of telephone calls, the content of email messages, Facebook entries and the personal internet history of users.[72] In 1971 David Ellsberg leaked 7,000 pages of material, known as the Pentagon Papers, to the *New York Times*. At the time, this constituted the largest single leak in US history. Snowden's haul of documents, of approximately 1.5 million files, was of a different magnitude. We are in a "new era of exposure", this time both governments as well and individuals are impacted.[73] Reflecting on the 58,000 top-secret documents exposed by Snowden, Omand has noted that "not even the KGB in its 1950s heyday could have dreamed of being in a position to do so much damage to western intelligence".[74] If secrecy is fundamental to UK definitions of intelligence, then it is an increasingly scarce commodity.

**Getting the fly out of the bottle**

The previous two sections have showed how the boundaries of intelligence have "blurred edges".[75] The first section demonstrated that the two closest intelligence communities – interpreting the opposing argument in logically the strongest version – have divergent definitions of intelligence; a difference in culture. The next section showed how datafication, primarily through the expression of surveillance, is having a profound effect on intelligence collection, ownership and the nature of secrecy; a difference in time. These two elements combined – culture and time – denote that the "essence" of intelligence is amorphous.

Daphne Park, one of Britain's most distinguished SIS operatives, once told the House of Lords: "Intelligence is a ceaseless underground struggle to protect British interests".[76] The definition resonated with her audience, but this is precisely because its language was specific to a culture and time. The more satisfactory a definition, using the Classical Theory of Definition, the more bound by culture and space it will be. Bearing in mind, however, the arguments in the previous sections, the reader ought to be able to identify their own issues with Baroness Park's definition. The solution is not simply to widen the boundaries –applying a Kentian definition of "Intelligence as

knowledge" permits too many activities that would not be considered intelligence. Thus, by trying to locate the necessary and sufficient conditions of intelligence, you reach an impasse between a broad definition, which incorporates too much, and a narrow one, which includes too little. How do you adjudicate between them? If two intelligence practitioners gave you their definitions, how would you decide between them? Choosing either one results in an unsatisfactory bounded definition of and unbounded concept. This is precisely why intelligence must be seen as what Wittgenstein saw as a "family resemblance" concept. This is a claim previously unmade in Intelligence Studies.

Wittgenstein was one of the most influential philosophers of the twentieth century. He is known mainly for his two works *Tractatus Logico-Philosophicus* (1921) and *Philosophical Investigations* (1953), the latter of which was published after his death. Throughout *Philosophical Investigations* he was concerned with language and meaning, the nature of the relationship between language and reality, as well as the nature and limits of language. He proposed the idea that human beings engage in what he referred to as "language games" – the negotiation of linguistic meanings, mediated through the perpetuity of human social interaction. In *Philosophical Investigations*, Wittgenstein used the term "language games" repeatedly before addressing the obvious question of what he meant by it. At aphorism 65, in an Augustinian voice (basically, a dialectical tool Wittgenstein uses throughout *PI* where he writes as an imaginary interlocutor which frames his retorts that follow) "someone" asks him to define the essence of a language game. By "essence" Wittgenstein meant "what is common to all these activities".[77] Ergo, to all of language; putting to himself the question, what is the essence of language itself? Wittgenstein elaborated on what he means by "language games" by asking us to consider the proceedings that we call "games":

> I mean board-games, card-games, ball-games, Olympic games, and so on. What is common to them all? —don't say: "There must be something common, or they would not be called 'games'"—but look and see whether there is anything common to all.— For if you look at them you will not see something that is common to all, but

> similarities, relationships, and a whole series of them at that…Look for example at board games, with their multifarious relationships. Now pass to card-games; here you will find many correspondences with the first group, but many common features drop out, and others appear. When we pass next to ball-games, much that is common is retained, but much is lost.—Are they all "amusing"? Compare chess with noughts and crosses. Or is there always winning and losing, or competition between players?...we can go through the many, many other groups of games in the same way; can see how similarities crop up and disappear.[78]

Succinctly, Wittgenstein's point is that as hard as one might try, it is not possible to come up with a single all-encompassing definition of a "game". The Augustinian voice within the quote is the other important element to draw out: "*there must* be something common, or they would not be called 'games'". Through this dialectical process, Wittgenstein is inviting us not to search for the "essence" of games, but to draw out our own thoughts and memories on games and what details we observe. To think about the many possible types of games – board games, card games, computer games, children's games, etc. The possible intensions of a game – winning, losing, amusement, self-improvement, fun, etc. How many players? The types of strategies? The rules? Does one practice to get better? Etc. You can continue through many other groups and elements of games. What becomes apparent through this examination is that "we see a complicated network of similarities overlapping and criss-crossing: sometimes overall similarities".[79] Wittgenstein referred to these overlapping similarities as "family resemblances"; "for the various resemblances between members of a family: build, features, colour of eyes, gait, temperament, etc. etc. overlap and criss-cross in the same way.-And I shall say: 'games' form a family".[80] Wittgenstein is replacing the old Platonic metaphor of "essence" and the Classical Theory of Definition's list of necessary and sufficient conditions, with "family resemblance" for concepts like games that have no common feature yet resemble each other, like family units.

The question now is whether intelligence is a "family resemblance" concept in the Wittgensteinian framework as he showed with games? To see if this is the case, we can establish systematically

whether intelligence has necessary and sufficient conditions, like a triangle, or whether it has none, like games. Before doing so, however, we must first catalogue various characteristics, or to borrow a phrase from Godson "elements", typically linked to intelligence. The list is by no means exhaustive; it draws on previous Anglo-American definitions in this article, but it is comprehensive enough to see what Wittgenstein's aphorism could mean for intelligence:

**Collection/ing:**
Of Information
From Observation
From Information not available in the public domain
Knowledge
Foreknowledge
Secret information
Secret collection
Information gleaned from an investigation
Information acquired against the wishes of the possessors
Open-source information
Information both public and private

**Analysis**
Evaluated information
Processed information
Integrated information
All-source analysis
Is processed by collation with other material
Assessment
Information that has been analyzed
Information that has been refined
For the purpose of understanding

**Covert action**
To influence
Facilitates foreign policy
Secret state activity
Government action
Non-attributable activity
Operations

**Initiated by:**
Organizations
Nations/ State
On behalf of decision makers
A nation's leader

**Against whom:**
Is against foreign governments
Is against an enemy
Foreign entities
Covert threats
In response to external threats

**For what ends:**
Protect a state's interests
Safeguard national welfare
Protecting against threat
To protect the well-being of one's own people
To support policymakers/ing
For those engaged in a competitive enterprise
To provide privileged insights
To guide decisions
To provide information for decision-makers
To stop threats against citizenry, property, or interests
The protection of a nation's homeland security
Information nation's leaders need to keep our country safe
Useful to policymakers in making decisions
Is related to national security
About potential threats to our national security

**Secrecy**
An underground struggle
By clandestine means
Against the wishes of its originators
Without the knowledge of the originators
Sources are kept secret
Techniques are kept secret
From secret sources

**Not secret**
Public or private
Information regardless of the source

With this rather long list above – made up only of terms found within the Anglosphere – we can begin to see how intelligence can be approached as a cluster concept.[81] The above list starts to draw out components that make up the "essence" of Intelligence. Some of the concepts flow nicely into each other, like collection and secrecy, as embodied in many British definitions. Others conflict, just like with games – American Football is full-contact, chess clearly is not. It is within the boundaries of a concept to contain both a characteristic and its opposite, as shown in the above taxonomy with intelligence and the element of secrecy within it.[82] What also becomes clear is that intelligence has no necessary conditions. If you take an element out, say "analysis" or "secrecy", both of which are regularly used as necessary conditions of intelligence, would what you are trying to define still be considered intelligence? For instance, if a government organization exists with some covert action function to counter covert threats? Moreover, would it be intelligence if an organization exists whose sole function is to collect open-source information useful to policymakers in making decisions? The outcome of all this is that no items on the list are *necessary* conditions. Virtually any one of them could be removed and you would still be looking at intelligence. Intelligence, therefore, like games, has no necessary conditions. It has no single essence.

Adopting Wittgenstein's approach to the intelligence definitions debate solves four problems within intelligence studies at once. First, those intelligence scholars above, and others, who have argued that intelligence is under-theorized, by embracing intelligence as a family resemblance concept can reinterpret the current literature as glimpses of different elements of intelligence. The "under-theorisation" claim is largely borne from the idea that if a sufficient amount of theorizing had taken place, we would have a stronger grasp of intelligence, perhaps even a solid definition. It is important to re-emphasize here one of the points Wittgenstein goes on to make in *PI*: that we actually do not have, nor need, a definition for games. The same is true for intelligence, as even without a definition, we use and apply the word successfully. Intelligence scholars, even young scholars on undergraduate intelligence modules, understand what is being discussed during

seminars. We can intuitively identify correct and inaccurate uses of "intelligence" without a list of necessary and sufficient conditions for the application of the concept.

Second, a family resemblance concept also means that multiple definitions, and previous articles forwarding them, are compatible with one another. It is important to point out here that I am *not* suggesting a pluralistic understanding of intelligence. The suggestion here is not that all definitions are equally legitimate. The advantage of a Wittgensteinian approach is that a definition's strength is predicated on the interest of the investigator. So, if the researcher were interested in the relationship between government, secrecy and intelligence, definitions that incorporate secrecy and government would be pertinent. What I am saying here is that intelligence represents one large cluster of different, sometimes conflicting, elements. As such, this cluster of elements is a loose one, connecting a series of crisscrossing short and long threads, which – again – do not go through every single instantiation of the definition. Just because we cannot draw a precise line around intelligence, it does not follow that there are no distinctions and that everything can be accommodated.

Third, those on a definitional quest in search of a "real" definition of intelligence – an absolute metaphysical realm where words have "true" meaning – can stop. Equally, those attempting to discover an intensional definition of intelligence, using the Classical Theory of Definition, ought to also move over to viewing intelligence as a cluster concept. This approach is not just more realistic in terms of language, but allows for nuance that eliminates the endless squabbles over "what intelligence is" and what it is not.

This brings me to my fourth advantage, the ability to delineate boundaries on subsets of family resemblance concepts for practical purposes. For example, in the cases Warner highlights in his article, where a definition is needed to help guide covert action, declassification or oversight.[83] For those purposes you can always construct a stipulative definition that does not need to be universal.[84]

Even if it were possible to create a definition of intelligence with all known extensions stated, it would be of no use for guiding covert action, declassification policy or oversight as it would be too broad. What is important in the three examples Warner provides is that those performing intelligence must be clear in their own minds — and make clear to those who provide oversight — what is meant by the term "intelligence" in the context of the task at hand.

**Conclusion**

Trying to construct an intensional definition of intelligence, which shifts from culture to culture and adjusts with the ebb and flow of time, is an impossibility. However, this is not necessary for the concept to be usable. Indeed, as Wittgenstein said, sometimes "a concept with blurred edges" is exactly what is needed.[85] Sherman Kent was correct in 1955 when he said that intelligence had a theory, craft and doctrine but what it needed was a body of literature.[86] This has been, and is being created over the past half century. That does not mean it cannot be refined and expanded upon. Equally, it also does not mean that just because there is no agreed-upon intensional definition of intelligence, the literature and lexical definitions provided so far are wrong. They provide limited glimpses into the essence of intelligence as relative to a particular time and place. We simply have to accept the varieties of meaning attached to the same term in different cultures and times. This is especially important if we are to embrace the important exhortations of Davies and Gustafson and move the study of intelligence outside the Anglosphere.[87]

It is also worth noting that even if intelligence is thought of as a "cluster concept", the definitional debate within Intelligence Studies will not disappear, nor is this outcome desirable. Though intelligence scholars may be bored by talks at conferences and articles in journals and books, the debate is a vital one for undergraduates studying intelligence for the first time. Even for seasoned academics in the field, the continued debate is useful for the reconsideration of first principles and the identification of new threads running through the many things we call "intelligence", and where

these threads overlap and crisscross in complex ways.[88] What will disappear, however, is the persistent claim of under-theorizing within Intelligence Studies.

The fifty-year fruitless quest for a satisfactory definition of "terrorism" should stand as a warning to those in search of universally acceptable terms. It is to be hoped that scholars of intelligence studies do not follow the same path. Meanwhile we have an attractive alternative. In place of a broad, all-encompassing definition of intelligence across cultures, borders and epochs we are best using Wittgenstein's family resemblance concept. Constructing a dogmatic definition which is sufficiently broad to encompass all uses of intelligence in the US, let alone the rest of the world, would be so broad as to fulfil Wilhelm Agrell's axiom: "When everything is intelligence - nothing is intelligence".[89] For academics engaged in the definitions of intelligence debate, there is no non-arbitrary way of selecting one definition for everyone everywhere. Fortunately, Wittgenstein has showed us the way out of the fly bottle.

Notes:

[1] Ludwig Wittgenstein, *Philosophical Investigations*, trans. G. E. M. Anscombe (Oxford: Basil Blackwell, 1986) §309; Hereafter *PI*. In conformity with the standard practice for citing *Philosophical Investigations*, I give the section number for Part I and the page number for Part II.
[2] A reductive explanation of *X* is one that tells us the underlying essence of *X* – that says what all and only *X*'s have in common. Wittgenstein was not just referring to generalizations. The fly-bottle, for Wittgenstein, was also representing the philosophical confusion as what he saw as misleading theories and explanations, such as the scientific method or logical positivism, applied to philosophy.
[3] *PI* § 66.
[4] *PI* §109.
[5] *PI* § 67.
[6] *PI* § 66.
[7] See footnote 14 for a list.
[8] See: Massimo Pigliucci, "Species as Family Resemblance Concepts: The (Dis) Solution of the Species Problem?," *BioEssays*, Vol. 25, No. 6, 2003, pp.596-602; John Mueller, "Six Rather Unusual Propositions about Terrorism," *Terrorism and Political Violence*, Vol. 17, No. 4, 2005, p.487; Alex P. Schmid (ed.), *Handbook of Terrorism Research* (London: Routledge, 2011), pp.86-87; Brian M. Jenkins, *The Study of Terrorism: Definitional Problems* (Santa Monica: RAND, 1980).
[9] Walter Laqueur, *A World of Secrets: The Uses and Limits of Intelligence* (New York: Basic Books, 1985), p.8. A claim Laqueur did not update or change in the 2002 version.
[10] David Kahn, "An Historical Theory of Intelligence," *Intelligence and National Security*, Vol. 16, No. 3, 2001, p.79.
[11] Michael Warner, "Wanted: A Definition of 'Intelligence,'" *Studies in Intelligence* Vol. 46, No. 3, 2002, p.15.
[12] Donald C. Watt, "Intelligence Studies: The Emergence of the British School," *Intelligence and National Security*, Vol. 3, No. 2, April 1988, *passim*.
[13] Christopher Andrew, "Intelligence, International Relations and 'Under-Theorisation,'" *Intelligence and National Security*, Vol. 19, No. 2, pp.170–184.
[14] See Michael Warner, "Wanted: A Definition"; Alan Breakspear, "A New Definition of Intelligence," *Intelligence and National Security*, Vol. 28, No.5, 2013, pp.678-693; Philip H. J. Davies, "Ideas of Intelligence: Divergent National Concepts and Institutions," in Christopher Andrew, Richard J. Aldrich, and Wesley K. Wark (eds.) *Secret Intelligence: A Reader* (London: Routledge, 2009) ch.2; Michael Warner, "Intelligence as Risk Shifting," in Peter Gill, Stephen Marrin, and Mark Phythian (eds.) *Intelligence Theory; Key Questions and Debates* (London: Routledge, 2009), pp.16–32; Loch Johnson, "Bricks and Mortar for a Theory of Intelligence," *Comparative Strategy*, Vol. 22, 2003, pp.1–28; Laqueur, *A World of Secrets*; Martin T. Bimfort, "A Definition of Intelligence," *Studies in Intelligence*, Fall 1958; Loch K. Johnson, "Preface to a Theory of Strategic Intelligence," *International Journal of Intelligence and Counterintelligence*, Vol. 16, No.4, Winter 2003-2004, pp.638-663; Kahn, "An Historical Theory"; David Omand, "Reflections on Secret Intelligence" in Peter Hennessy (ed.), *The New Protective State* (London: Continuum, 2007) pp.97-122; Jennifer Sims, "The Theory and Philosophy of Intelligence," in Robert Dover, Michael S. Goodman and Claudia Hillebrand (eds.) *Routledge Companion to Intelligence Studies* (London; Routledge, 2014), ch. 4; Thomas F. Troy, "The 'Correct' Definition of Intelligence," *International Journal of Intelligence and CounterIntelligence*, Vol. 5, No.4, 1991, pp.433-454; Winn L. Taplin, "Six General Principles of Intelligence," *International Journal of Intelligence and CounterIntelligence*, Vol. 3, No. 4, Winter 1989, pp.475-491; Jennifer Sims, "What is Intelligence? Information for Decision-Makers," in Roy Godson, Ernest R. May, and Gary

Schmitt (eds.), *U.S. Intelligence at the Crossroads* (London: Brassey's, 1995); Gregory F. Treverton, Seth G. Jones, Steven Boraz, and Phillip Lipscy, *Toward a Theory of Intelligence: Workshop Report* (Santa Monica, CA: RAND Corporation, 2006); Lisa Krizan, *Intelligence Essentials for Everyone, Joint Military Intelligence College*, Occasional Paper No.6 (Washington, DC: GPO, 1999); Abram N. Shulsky and Gary J. Schmitt, *Silent Warfare: Understanding the World of Intelligence* (Dulles, VA: Brassey's Inc., 2002) ch.1; Andrew Rathmell, "Towards Postmodern Intelligence," *Intelligence and National Security*, Vol. 17, No. 3, 2002, pp.87-104; Lenn V. Scott and Peter D. Jackson, "The Study of Intelligence in Theory and Practice," in Lenn V. Scott and Peter D. Jackson, (eds.), *Understanding Intelligence in the Twenty-First Century: Journeys in Shadows* (London: Routledge, 2004) pp.139-169.

[15] The Classical Theory of Definition has two principal tenets: (1) that a "proper'" intensional definition states in the definiens the necessary and sufficient conditions for the correct application of the definiendum; and (2) that there are intensional definitions for each of the class terms (e.g. "sheep," "table," "dentist," etc.) which we use. See Patryk Burek, "Adoption of the Classical Theory of Definition to Ontology Modeling: 11th International Conference, AIMSA 2004, Varna, Bulgaria, September 2-4, 2004" in Christoph Bussler & Dieter Fensel (eds.) *Adoption of the Classical Theory of Definition to Ontology Modeling* (Berlin, Heidelberg: Springer Berlin Heidelberg), pp. 1–10.

[16] For example, being a mother is a sufficient condition for being female; being female is a necessary condition for being a mother.
i.e.:
"x is a sufficient condition for y" = df "the truth of x guarantees the truth of y"
"x is a necessary condition for y" = df "the falsity of x guarantees the falsity of y"

[17] For example, something can be both closed and lie in a plane without being a triangle (e.g. it could be a square). See Norman Swartz, "Definitions, Dictionaries, and Meanings," 8 November 2010, at: http://www.sfu.ca/~swartz/definitions.htm

[18] Paradigm cases are readily found in geometry and mathematics.

[19] Michael Warner, "Wanted: A Definition," p.21.

[20] Alan Breakspear, "A New Definition."

[21] Sorin Bangu, "Later Wittgenstein on Essentialism, Family Resemblance and Philosophical Method," *Metaphysica*, Vol. 6, No. 2, 2005, pp.53-73.

[22] The term is also known by "cluster concept," which was coined by Douglas Gasking. See: Douglas Gasking, "Clusters," *The Australasian Journal of Philosophy*, Vol. 38, No. 1, May 1960, pp.1-36.

[23] Cline to Nitze, 30 June 1977, Box 135, Folder 6, Paul Nitze papers, Manuscripts Division, Library of Congress.

[24] Robin W. Winks, *Cloak and Gown: Scholars in the Secret War, 1939-1961* (New York: Morrow, 1987).

[25] Sherman Kent, "Prospects for the National Intelligence Service," *Yale Review*, 36 1946, p.117. In the twenty-first century, I would expand on Kent's observation, adding that intelligence is also an actor within the policy machine itself, competing with other state agencies as an exploiter of the end product.

[26] Sherman Kent, *Strategic Intelligence for American World Policy* (Princeton: Princeton UP, 1949), p. 1. I would postulate that this is down to his exposure to the British system of intelligence during the Second World War.

[27] Davies, "Ideas of Intelligence," p.64.

[28] *Ibid*. It is worth pointing out that these national definitions of intelligence are not distinct discrete categories. Some American scholars take narrow definitions, like Abram Shulsky and some British scholars, like David Omand, take broad ones.

[29] Kenneth G. Robertson, "Intelligence, Terrorism and Civil Liberties," *Conflict Quarterly*, Vol. 7, No. 2, 1987, p.47.

[30] Christopher Andrew and David Dilks (eds.), *The Missing Dimension*: *Governments and Intelligence Communities in the Twentieth Century* (Basingstoke: Macmillan, 1984), p.5.
[31] Kahn, "An Historical Theory," p.79.
[32] Jennifer E. Sims, "Defending Adaptive Realism," in Peter Gill, Stephen Marrin and Mark Phythian (eds.) *Intelligence Theory: Key Questions and Debates* (London: Routledge 2008), p.154.
[33] Lyman B. Kirkpatrick, Jr., "Intelligence," in Bruce W. Jentleson and Thomas G. Paterson (eds.) *Encyclopedia of US Foreign Relations, Volume II* (Oxford: Oxford UP, 1997), p.365.
[34] Thomas F. Troy, "The Correct Definition", p.449.
[35] Stella Rimington, *Intelligence, Security and the Law, James Smart Lecture*, Glasgow, Scotland, 3 November 1994, at: https://www.mi5.gov.uk/home/about-us/who-we-are/staff-and-management/director-general/speeches-by-the-director-general/director-generals-james-smart-lecture-1994.html
[36] Andrew Parker, *Director General's Speech at RUSI* [Lecture], Address by the Director General of the Security Service to the Royal United Services Institute Whitehall, London, 8 October 2013, at: https://www.mi5.gov.uk/home/about-us/who-we-are/staff-and-management/director-general/speeches-by-the-director-general/director-generals-speech-at-rusi-2013.html
[37] Although Andrew Parker comes close to including it by the use of the term "disruption".
[38] UK, Cabinet Office & National Security and Intelligence, *Guidance: National Intelligence Machinery* (London, UK, 19 November 2010), p.36, at: https://www.sis.gov.uk/glossary.html
[39] M.I.5 website, "What is Espionage?" at: https://www.mi5.gov.uk/home/about-us/what-we-do/the-threats/espionage/what-is-espionage.html
[40] R. Hon. The Lord Butler, *Review of Intelligence on Weapons of Mass Destruction* (London: HMSO, 2004), p.7.
[41] R. Hon. The Lord Franks, *Falklands Islands Review: Report of a Committee of Privy Consellors* (London: HMSO, 1983). The Franks Report, as it was known, was the outcome of a parliamentary inquiry into the origins of the Falklands War.
[42] Butler Report, p.7 & private information.
[43] Office of the Director of National Intelligence, *National Intelligence, A Consumer's Guide*, 2011, p.7, at: http://www.dni.gov/files/documents/IC_Consumers_Guide_2011.pdf
[44] CIA website, "What is Intelligence?," at: https://www.cia.gov/news-information/featured-story-archive/2007-featured-story-archive/what-is-intelligence.html
[45] FBI website, "Intelligence Defined," at: https://www.fbi.gov/about-us/intelligence/defined
[46] On the supply of raw CX to Downing Street see, Peter Hennessy, *Having It So Good: Britain in the 1950s* (London: Allen Lane, 2006), pp.488-489.
[47] Roy Godson, *Comparing Foreign Intelligence* (Washington: Pergamon-Brassey's, 1988), p.4; John J. Dziak, *Chekisty*: *A History of the KGB* (Lexington: Lexington Books, 1988), pp.1-2; and Alexander Orlov, "The Theory and Practice of Soviet Intelligence," *Studies in Intelligence*, Spring 1963, pp.45–48.
[48] Web Index, "*The Web and Rising Global Inequality: Report,"* at: http://thewebindex.org/wp-content/uploads/2014/12/Web_Index_24pp_November2014.pdf ; and International Telecommunication Union (ITU), "*The World in 2014: ICT Facts and Figures,"* at: http://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2014-e.pdf
[49] Danny Sullivan (Search Engine Land), "*Google: 100 Billion Searches Per Month, Search To Integrate Gmail, Launching Enhanced Search App For iOS*," 8 August, 2012, at: http://searchengineland.com/google-search-press-129925
[50] Goggle, Inc., "*Zeitgeist 2012,"* at: http://www.google.com/zeitgeist/2012/#the-world
[51] Facebook, Inc., "*Company Info,"* at: http://newsroom.fb.com/company-info/
[52] Michael Warner, *The Rise and Fall of Intelligence: An International Security History* (Washington, D.C.: Georgetown University Press, 2014), p.336.
[53]Jennifer E. Sims and Burton Gerber (eds.), *Vaults, Mirrors, and Masks Rediscovering U.S. Counterintelligence* (Washington, DC: Georgetown UP).

[54] Marcel Rosenbach, Holger Stark and Jonathan Stock (Spiegel Online International), "How can an intelligence agency, even one as large and well-staffed as the NSA with its 40,000 employees, work meaningfully with such a flood of information?," 10 June 2013, p. 2, at: http://www.spiegel.de/international/world/prism-leak-inside-the-controversial-us-data-surveillance-program-a-904761.html ; and The National Security Agency, "60 Years of Defending Our Nation," 2012, p.3, at: https://www.nsa.gov/about/cryptologic_heritage/60th/book/NSA_60th_Anniversary.pdf. ; and Harvey A. Davis, *Statement for the Record* (Speech), Washington, DC, 12 March 2002, at: http://www.nsa.gov/public_info/speeches_testimonies/12mar02.shtml

[55] David Omand, "Into the Future: A Comment on Agrell and Warner," *Intelligence and National Security* Vo. 27, No. 1, 2012, p. 154; and Peter Hennessy, *The New Protective State: Government, Intelligence and Terrorism* (London: Continuum 2008).

[56] *Ibid*, p.156. Earlier Peter Hennessy made a similar claim to Omand. The pair differ as Hennessy emphasized the primary driver of change as new threats, where Omand focused on technological innovation.

[57] See Deborah G. Barger, *Toward a Revolution in Intelligence Affairs* (Santa Monica: RAND, 2005). The "revolution in intelligence affairs" draws heavily from "the revolution in military affairs" sharing concepts and terminology. Both are tied to changes in how the US conducts warfare and relate to communications, and space technology.

[58] Louis E. Andre, "Intelligence Production: Towards a Knowledge-Based Future," *Defense Intelligence Journal*, Vol.6, No. 2, 1997, pp.33-45; Bruce Berkowitz, "Information Age Intelligence," *Foreign Policy*, Vol. 103, 1996, p.135; John W. Bodnar, *Warning Analysis for the Information Age: Rethinking the Intelligence Process* (Washington, DC: JMIC Center for Strategic Intelligence Research, 2003); and William Nolte, "Keeping Pace with the Revolution in Intelligence Affairs," *Studies in Intelligence*, Vol. 48, No. 1, 2004, pp.1-9.

[59] Gregory F. Treverton, *Reshaping National Intelligence for an Age of Information* (Cambridge: Cambridge UP, 2003); Michael Herman, *Intelligence Services in The Information Age: Theory and Practice* (London: Routledge, 2001); and Jennifer E. Sims (ed.), *Transforming US Intelligence* (Washington, DC: Georgetown UP, 2005).

[60] Russia, with its 286 million population in 1989, employed about 480,000 in the various branches of KGB, which meant roughly one in 600 Soviet citizens was a KGB employee. The FBI was roughly 1 in 13,711 in the same year. See: *John C. Schmeidel, Stasi*: *Shield* and *Sword* of the *Party* (London: Routledge, 2008), p.26.

[61] Important to note, I am talking capabilities here. *Not* intentions.

[62] The term American Gestapo has been used by many, but is usually attributed to Eleanor Roosevelt. Eleanor wrote to J. Edgar Hoover decrying the "Gestapo Methods" used in the Bureau's investigation of Eleanor's Social Secretary and other aides. See Eleanor Roosevelt to J. Edgar Hoover, 26 January 1941, FBI File, quoted in Curt Gentry, *J. Edgar Hoover: The Man and His Secrets* (New York: Norton, 1991), p.207.

[63] Web Index 2014, p.4.

[64] Web Index 2014, p.21.

[65] Peter Hennessy, *The New Protective State*, p.15.

[66] *Ibid*.

[67] See Michael Scheuer, *Through the Eyes of our Enemy* (Lincoln, NE: Potmac Books, 2007).

[68] The inversion is not "zero-sum," rather it is a switching of resources and priorities.

[69] Ewen MacAskill, Julian Borger, Nick Hopkins, Nick Davies and James Ball, "GCHQ taps fibre-optic cables for secret access to world's communications," *the Guardian*, 21 June 2013, at: http://www.theguardian.com/uk/2013/jun/21/gchq-cables-secret-world-communications-nsa ; Barton Gellman and Laura Poitras, "U.S., British intelligence mining data from nine U.S. Internet companies in broad secret program," *The Washington Post*, 7 June 2013, at: http://www.washingtonpost.com/investigations/us-intelligence-mining-data-from-nine-us-internet-

companies-in-broad-secret-program/2013/06/06/3a0c0da8-cebf-11e2-8845-d970ccb04497_story.html

[70] Richard J. Aldrich, "*Privacy is Dead: The Future is Fabulous* (Speech)," TEDxTalks, Warwick University Campus, Coventry, 7 May 2015, at: https://www.youtube.com/watch?v=M11nmdKdKV8

[71] "NSA Prism Program slides," *the Guardian*, 1 November 2013, at: http://www.theguardian.com/world/interactive/2013/nov/01/prism-slides-nsa-document

[72] Kadhim Shubber, "A Simple Guide to GCHQ's Internet Surveillance Programme Tempora," *Wired.co.uk*, 24 June 2013, at: http://www.wired.co.uk/news/archive/2013-06/24/gchq-tempora-101 ;and MacAskill, Borger, et al., "GCHQ taps fibre-optic cables"

[73] Richard J. Aldrich, "Regulation by Revelation? Intelligence, Transparency and the Media," in Robert Dover & Michael S. Goodman (eds.) *Spinning Intelligence: Why Intelligence Needs the Media, Why the Media Needs Intelligence* (New York: Columbia UP, 2009), pp.13-15.

[74] David Omand, "Edward Snowden's leaks are misguided – they risk exposing us to cyber-attacks," *the Guardian*, 26 September 2013, at: http://www.theguardian.com/commentisfree/2013/sep/26/edward-snowden-leaks-misguided-cyber-attacks

[75] *PI* §71.

[76] House of Lords, UK, vol. 550, cc. 1023-79, 9 December 1993. Park was actually quoting Percy Cradock, one of Britain's most distinguished JIC Chairmen.

[77] *PI* § 65. The idea of "essence" goes back to Plato who talks of the essence of various things in some absolute metaphysical realm. That words have some "true" meaning that can be discovered.

[78] *PI* § 66.

[79] *PI* § 66.

[80] *PI* § 67.

[81] It is also worth noting that those who are the subjects or targets of intelligence operations rarely have a voice in debates on the essence of intelligence. Words like "danger", "illegality", "oppression", "criminality", "torture", or "surveillance" are noticeably absent.

[82] The dilemmas, however, make it logically impossible for the list to be jointly-sufficient.

[83] Warner, "Wanted: A Definition," p.21.

[84] Stipulative definitions stipulate, or specify, how a term is to be used.

[85] *PI* § 71.

[86] Sherman Kent, "The Need for an Intelligence Literature," *Studies in Intelligence*, Spring 1955 (reprinted in Studies in Intelligence, 45th Anniversary Special Edition, Washington, DC: CQ Press, 2000), pp.1-11.

[87] Philip H. J. Davies and Kristian Gustafson (eds.), *Intelligence Elsewhere Spies and Espionage Outside the Anglosphere* (Washington DC: Georgetown UP, 2013), pp.3-7.

[88] The quote is taken from Wittgenstein.

[89] Wilhelm Agrell, "When Everything Is Intelligence - Nothing Is Intelligence," Occasional Papers, *The Sherman Kent Center for Intelligence Analysis*, Vol.1, No. 4, October 2002.